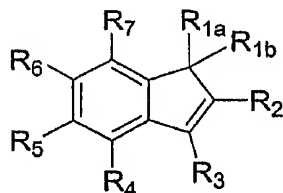


**WHAT IS CLAIMED IS:**

1. An indene derivative of formula (I) or a pharmaceutically acceptable salt thereof:

5



(I)

wherein,

$R_{1a}$  is OH or H;

$R_{1b}$  is  $C_{1-6}$  alkyl,  $C_{3-6}$  cycloalkyl, benzyl or phenyl, the phenyl being  
 10 optionally substituted with one or more substituents selected from the group  
 consisting of halogen, CN,  $NH_2$ ,  $NO_2$  and  $OR^a$ , when  $R_{1a}$  is OH; when  $R_{1a}$  is H,

$R_{1b}$  is  $OR^a$ ,  $NR^bR^c$ ,  $NHCO R^a$  or  $-\frac{1}{2}-N\langle R^d \rangle$ ;

$R_2$  is CN,  $CO_2R^a$  or  $CONR^cR^f$ ;

$R_3$  is phenyl optionally substituted with one or more substituents selected  
 15 from the group consisting of halogen, CN,  $NH_2$ ,  $NO_2$ ,  $OR^a$  and  $C_{1-6}$  alkyl; and

$R^4$ ,  $R^5$ ,  $R^6$  and  $R^7$  are each independently H,  $O(CH_2)_mR^g$  or  $CH_2R^h$ ;

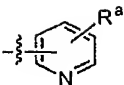
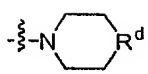
in which

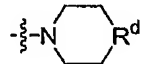
$R^a$  is H,  $C_{1-6}$  alkyl or  $C_{3-6}$  cycloalkyl, the  $C_{1-6}$  alkyl and  $C_{3-6}$  cycloalkyl  
 being optionally substituted with one or more halogens;

20  $R^b$ ,  $R^c$ ,  $R^e$  and  $R^f$  are each independently H,  $C_{1-6}$  alkyl,  $C_{3-6}$  cycloalkyl or  
 benzyl;

$R^d$  is O, S or  $NR^a$ ;

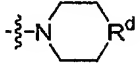
- 56 -

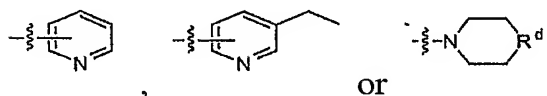
$R^g$  is H, , , or phenyl, the phenyl being optionally substituted with one or more substituents selected from the group consisting of halogen, CN, NH<sub>2</sub> and NO<sub>2</sub>;

$R_h$  is ; and

5  $m$  is an integer in the range of 1 to 3.

2. The compound of claim 1, wherein  $R_{1b}$  is C<sub>1-6</sub> alkyl, C<sub>3-6</sub> cycloalkyl, benzyl or phenyl, the phenyl being optionally substituted with one or more methoxy groups,

when  $R_{1a}$  is OH; when  $R_{1a}$  is H,  $R_{1b}$  is OR<sup>a</sup>, NR<sup>b</sup>R<sup>c</sup>, NHCOR<sup>a</sup> or ;  $R_3$  is  
10 phenyl being optionally substituted with one or more halogens or C<sub>1-4</sub> alkyls; and  
 $R_4$  and  $R_7$  is H, in which  $R^a$  is H or C<sub>1-6</sub> alkyl;  $R^d$  is O or S;  $R^g$  is H, phenyl,



3. The compound of claim 1, wherein  $R_3$  is phenyl,  $R_5$  is H, and  $R_6$  is O(CH<sub>2</sub>)<sub>m</sub>R<sup>g</sup>  
15 or CH<sub>2</sub>R<sup>h</sup>.

4. The compound of claim 1, which is selected from the group consisting of:  
1-hydroxy-6-methoxy-1,3-diphenyl-1H-indene-2-carboxylic acid ethyl  
ester,  
20 1-hydroxy-6-methoxy-1-(3-methoxy-phenyl)-3-phenyl-1H-indene-2-  
carboxylic acid ethyl ester,  
1-hydroxy-1-isopropyl-6-methoxy-3-phenyl-1H-indene-2-carboxylic acid  
ethyl ester,  
1-hydroxy-6-methoxy-1-methyl-3-phenyl-1H-indene-2-carboxylic acid

ethyl ester,

1-benzyl-1-hydroxy-6-methoxy-3-phenyl-1H-indene-2-carboxylic acid

ethyl ester,

1-cyclohexyl-1-hydroxy-6-methoxy-3-phenyl-1H-indene-2-carboxylic acid

5 ethyl ester,

1-hydroxy-1,3-diphenyl-6-(3-phenyl-propoxy)-1H-indene-2-carboxylic  
acid ethyl ester,

1-hydroxy-6-(2-morpholine-4-yl-ethoxy)-1,3-diphenyl-1H-indene-2-  
carboxylic acid ethyl ester,

10 1-hydroxy-6-morpholine-4-yl-methyl-1,3-diphenyl-1H-indene-2-  
carboxylic acid ethyl ester,

1-hydroxy-1,3-diphenyl-6-(2-pyridine-2-yl-ethoxy)-1H-indene-2-  
carboxylic acid ethyl ester,

1-hydroxy-1,3-diphenyl-6-(3-phenyl-propoxy)-1H-indene-2-

15 Carbonitrile,

1-hydroxy-1,3-diphenyl-6-(3-phenyl-propoxy)-1H-indene-2-carboxylic  
acid methyl ester,

1-hydroxy-6-methoxy-1,3-diphenyl-1H-indene-2-carboxylic acid,

1-hydroxy-6-methoxy-1-methyl-3-phenyl-1H-indene-2-carboxylic acid,

20 1-benzyl-1-hydroxy-6-methoxy-3-phenyl-1H-indene-2-carboxylic acid,

1-hydroxy-1,3-diphenyl-6-(3-phenyl-propoxy)-1H-indene-carboxylic acid,

1-cyclohexyl-1-hydroxy-6-methoxy-3-phenyl-1H-indene-2-carboxylic acid,

1,6-dimethoxy-3-phenyl-1H-indene-2-carboxylic acid ethyl ester,

1-ethoxy-6-methoxy-3-phenyl-1H-indene-2-carboxylic acid ethyl ester,

25 1-amino-6-methoxy-3-phenyl-1H-indene-2-carboxylic acid ethyl ester,

1-amino-3-phenyl-6-(3-phenyl-propoxy)-1H-indene-2-carboxylic acid ethyl  
ester,

1-amino-6-(2-morpholin-4-yl-ethoxy)-3-phenyl-1H-indene-2-carboxylic  
acid cyclohexyl amide,

30 1-amino-3-phenyl-6-(3-phenyl-propoxy)-1H-indene-2-carbonitrile,

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1-acetylamino-6-methoxy-3-phenyl-1H-indene-2-carboxylic acid ethyl ester,

6-methoxy-3-phenyl-1-propionylamino-1H-indene-2-carboxylic acid ethyl ester,

5 1-acetylamino-3-phenyl-6-(3-phenyl-propoxy)-1H-indene-2-carboxylic acid ethyl ester,

1-acetylamino-6-(2-morpholin-4-yl-ethoxy)-3-phenyl-1H-indene-2-carboxylic acid cyclohexyl amide,

10 1-diethylamino-6-methoxy-3-phenyl-1H-indene-2-carboxylic acid ethyl ester,

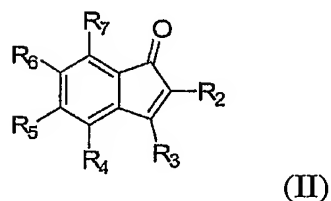
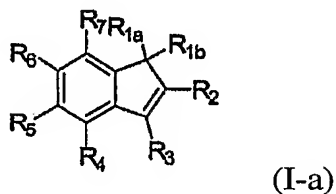
1-ethylamino-6-methoxy-3-phenyl-1H-indene-2-carboxylic acid ethyl ester,

6-methoxy-1-morpholin-4-yl-3-phenyl-1H-indene-2-carboxylic acid ethyl ester,

15 1-benzyl amino-6-methoxy-3-phenyl-1H-indene-2-carboxylic acid ethyl ester, and

1-cyclohexyl amino-6-methoxy-3-phenyl-1H-indene-2-carboxylic acid ethyl ester.

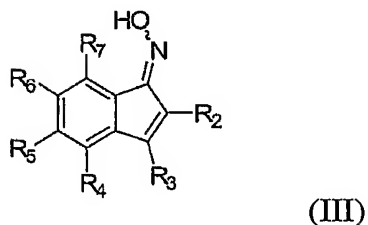
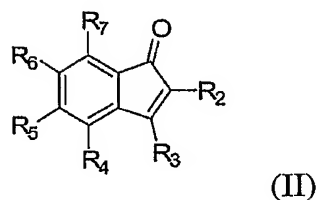
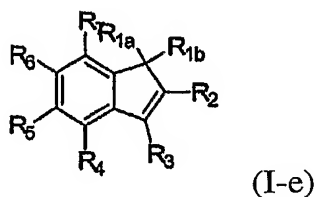
5. A process for preparing a compound of formula (I-a) which comprises  
20 reacting a compound of formula (II) with a Grignard reagent:



wherein R<sub>1a</sub> is OH; R<sub>1b</sub> is alkyl, phenyl or benzyl; and R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub>, R<sub>6</sub> and R<sub>7</sub> have

the same meaning as defined in claim 1.

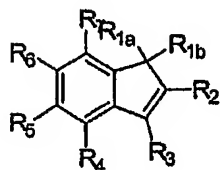
6. A process for preparing a compound of formula (I-e) which comprises reacting a compound of formula (II) with hydroxyl amine to obtain a compound of  
 5 formula (III), and hydrogenation of the compound of formula (III) followed by reacting with acetyl chloride or an anhydrous acetic acid:



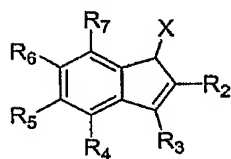
- 10 wherein R<sub>1a</sub> is H; R<sub>1b</sub> is NH<sub>2</sub> or NHCOR<sup>a</sup>; and R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub>, R<sub>6</sub> and R<sub>7</sub> have the same meaning as defined in claim 1.

7. A process for preparing a compound of formula (I-d) which comprises halogenation of a compound of formula (VIII) to obtain a compound of formula  
 15 (IV), and reacting the compound of formula (IV) with an amine or alcohol compound:

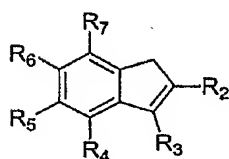
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(I-d)



(IV)



(VIII)

wherein  $R_{1a}$  is H;  $R_{1b}$  is  $OR^a$ ,  $NR^bR^c$  or ; X is halogen; and  $R_2$ ,  $R_3$ ,  $R_4$ ,  $R_5$ ,

5  $R_6$  and  $R_7$  have the same meaning as defined in claim 1.

8. A pharmaceutical composition for modulating the activities of peroxisome proliferator activated receptors (PPARs) comprising a therapeutically effective amount of the compound or a salt defined in claim 1 as an active ingredient together  
10 with a pharmaceutically acceptable carrier.

9. The composition of claim 8, which is used for the treatment and prevention of diabetes, obesity, arteriosclerosis, hyperlipidemia, hyperinsulinism, hypertension, osteoporosis, liver cirrhosis, asthma and cancer.